

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A low voltage differential signaling (LVDS) transmitting device, comprising:

a signal driving circuit for generating and outputting an analog image signal to an LVDS receiving device, comprising a differential signaling device including at least four transistors, a first current source including a transistor coupled between a power source and said differential signaling device, and a second current source including at least two transistors coupled between said differential signaling device and ground; and

a signal compensation circuit in communication with said signal driving circuit, ~~comprising: generating a compensation signal in response to said analog image signal and a base signal, and feeding said compensation signal back to said signal driving circuit to compensate the current signal variation of said first current source so as to stabilize said analog image signal generated by said signal driving circuit.~~

a voltage-to-current converting circuit for generating and outputting a compensation signal as a current type in response to said analog image signal and a base signal; and

a first current mirror circuit and a second current mirror circuit for feeding said compensation signal back to said signal driving circuit, wherein said first current mirror circuit is coupled to said voltage-to-current converting circuit and ground, and said second current mirror circuit is coupled to said first current mirror circuit, a power source and a differential signaling circuit of said signal driving circuit, thereby compensating the current signal variation of said first current source so as to stabilize said analog image signal generated by said signal driving circuit.

2. (Cancelled)

3. (Currently Amended) The LVDS transmitting device according to claim 2 1 wherein said voltage-to-current converting circuit outputs said compensation signal according to a voltage difference between said analog image signal and base signal.

4. (Previously Cancelled)

5. (Previously Cancelled)

6. (Currently Amended) The LVDS transmitting device according to claim 2 1 wherein each of said first and said second current mirror circuits includes two transistors.

7. (Currently Amended) The LVDS transmitting device according to claim 2 1 wherein said signal compensation circuit further comprises a first and a second shunting resistors electrically connected between said signal driving circuit and said voltage-to-current converting circuit for shunting said analog image signal before said analog image signal is transmitted to said voltage-to-current converting circuit.

8. (Original) The LVDS transmitting device according to claim 1 wherein said signal driving circuit is electrically connected to two serially connected resistors of said LVDS receiving device for transmitting said analog image signal with a swing of 300 mV ~350 mV to said LVDS receiving device.

9. (Original) The LVDS transmitting device according to claim 1 wherein said base signal is a band-gap voltage signal generated by a band-gap circuit.

10. (Currently Amended) A compensation circuit for use with a signal driving circuit of a low voltage differential signaling (LVDS) transmitting device, comprising:

a signal converting circuit receiving an analog image signal from said signal driving circuit, and generating a compensation signal according to a voltage difference between said analog image signal and a base signal; and

a current mirror circuit in communication with said signal driving circuit and said signal converting circuit, comprising at least two current mirror sub-circuits for feeding said compensation signal back to a specified current source of said signal driving circuit coupled between a power source and a differential signaling device of said signal driving circuit for compensating signal variation of said signal driving circuit,

wherein each of said current mirror sub-circuits includes two transistors.

11. (Original) The compensation circuit according to claim 10 wherein said signal converting circuit is a voltage-to-current converting circuit for outputting said compensation signal as a current type.

12. (Original) The compensation circuit according to claim 10 wherein said base signal is a constant voltage signal generated by a band-gap circuit.

13. (Cancelled).

14. (Currently Amended) The compensation circuit according to claim ~~11~~ 10 wherein one of said ~~first~~ sub-circuits is coupled to said signal converting circuit and ground, and another one of said ~~second~~ sub-circuits is coupled to ~~said first sub-circuit~~, said power source and said differential signaling circuit of said signal driving circuit.

15. (Previously Presented) The compensation circuit according to claim 14 wherein said compensation signal fed back to said signal driving circuit compensates the current signal variation of said specified current source so as to stabilize said analog image signal generated by

said signal driving circuit.

16. (Original) The compensation circuit according to claim 15 wherein said specified current source includes a transistor.

17. (Original) The compensation circuit according to claim 10 further comprising a first and a second shunting resistors electrically connected between said signal driving circuit and said signal converting circuit for shunting said analog image signal before said analog image signal is transmitted to said signal converting circuit.

18. (Currently Amended) A method for stabilizing an analog image signal outputted from a signal driving circuit of an low voltage differential signaling (LVDS) transmitter to an LVDS receiver, comprising steps of:

shunting said analog image signal;

generating a compensation signal according to a voltage difference between said shunted analog image signal and a base signal; and

feeding said compensation signal to a current source of said signal driving circuit coupled between a power source and a differential signaling device of said signal driving circuit to compensate said analog image signal via a at least two mirroring operations performed by two current mirror sub-circuits between said current source and said compensation signal,

wherein each of said current mirror sub-circuits includes two transistors.

19. (Original) The method according to claim 18 wherein said base signal is a constant band-gap voltage signal.